

FIG. 1

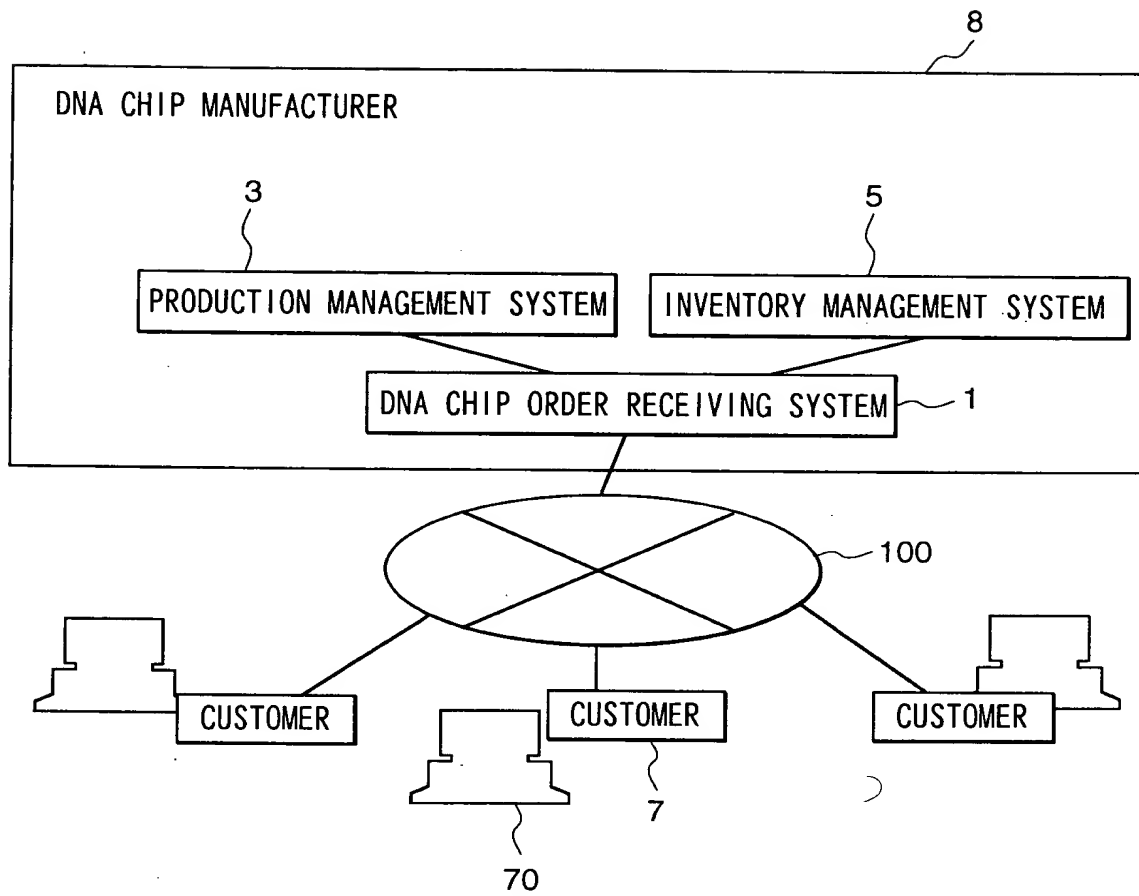


FIG. 2

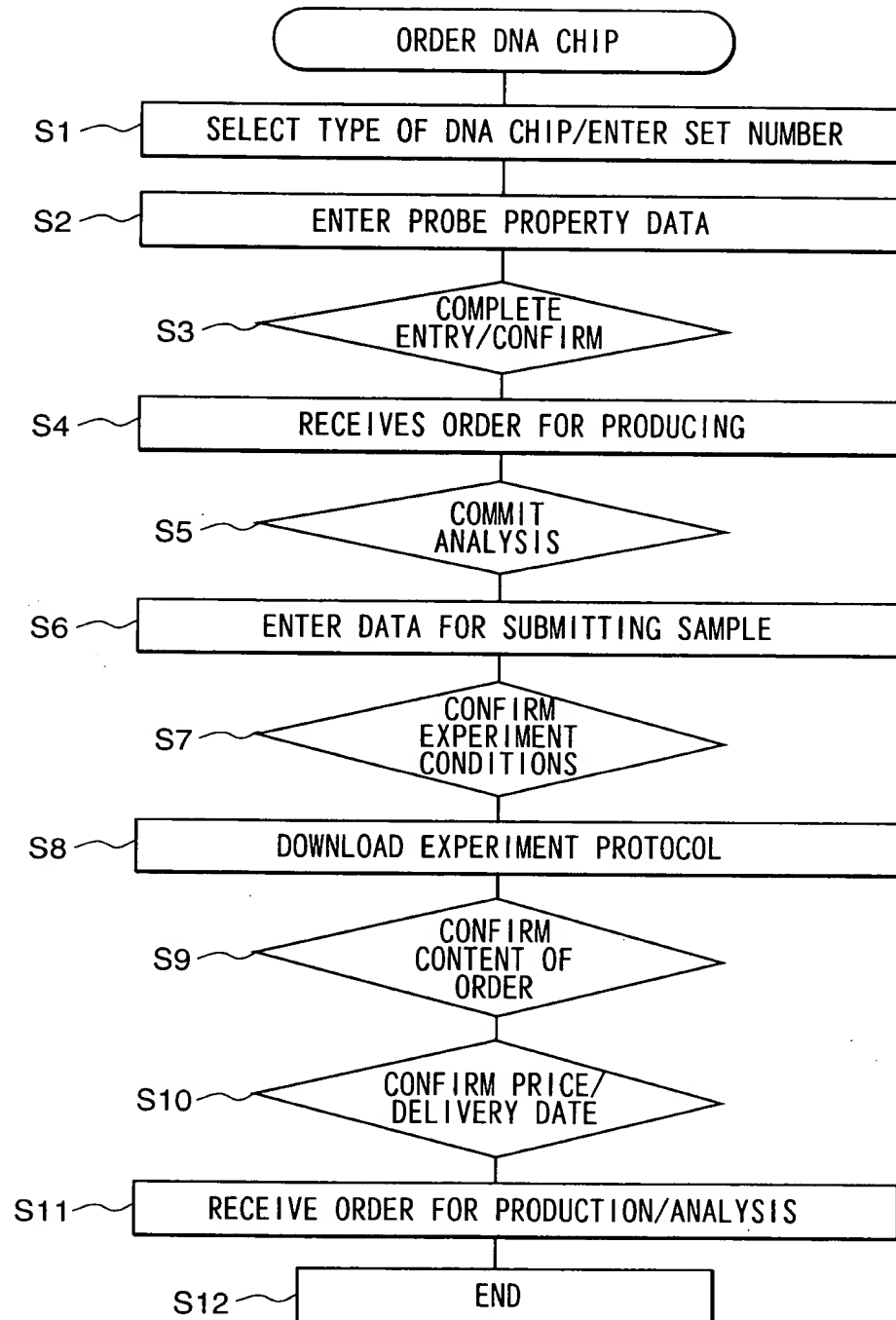


FIG. 3

PROBE TYPE SELECTION SCREEN

ENTER TYPE AND NUMBER OF SETS OF DNA CHIPS YOU WANT
US TO PRODUCE, AND THEN CLICK SUBMIT.

1. TYPE A 2. TYPE B 3. TYPE C

YOUR SELECTION: _

HOW MANY SETS DO YOU DRDER? : _SET (S)

FIG. 4

PROBE INFORMATION ENTRY SCREEN

ENTER INFORMATION ABOUT PROBES USED FOR
YOUR DNA CHIPS, AND THEN PRESS SUBMIT.

PROBE ID	PROVIDER	BASE NUMBER	T _m VALUE	BASE SEQUENCE	. . .
A001	ORDER- RECEIVING PARTY	XX	XX	algcg...	. . .
A002	ORDER- PLACING PARTY	XX	XX	gccla...	. . .
A003	ORDER- PLACING PARTY	XX	XX	ggccla...	. . .
.

FIG. 5

PROBE INFORMATION ENTRY CONFIRMATION SCREEN
ARE YOU SURE YOU WANT THE FOLLOWING ORDER?
IF SO, CLICK SUBMIT.

PROBE ID	PROVIDER	BASE NUMBER	T _m VALUE	BASE SEQUENCE	. . .
A001	ORDER-RECEIVING PARTY	XX	XX	atgcg...	. . .
A002	ORDER-PLACING PARTY	XX	XX	gccta...	. . .
A003	ORDER-PLACING PARTY	XX	XX	ggctta...	. . .
.

DO YOU WANT US TO SYNTHESIZE A002, A003, ...?

FIG. 6

ANALYSIS COMMISSION SELECTION SCREEN

DO YOU WANT US TO ANALYZE YOUR PRODUCED DNA CHIPS?
SELECT ANT THEN CLICK SUBMIT.

1. I WANT YOU TO ANALYZE.
2. I DO NOT WANT YOU TO ANALYZE, AND ANALYZE BY OURSELVES.

YOUR SELECTION: _

FIG. 7

SAMPLE SUBMISSION DATE ENTRY SCREEN

ENTER DATE BY WHICH YOU SUBMIT YOUR SAMPLE TO US.

REACH US BY MONTH:_, DAY:_, YEAR:_

FIG. 8

EXPERIMENT PROTOCOL CONFIRMATION SCREEN 1

REACTION CONDITIONS WILL BE OPTIMIZED BASED ON
THE NUMBER AND PROPERTIES OF YOUR PROBES.
THE REACTION CONDITIONS OF YOUR SAMPLE AND THE
INDIVIDUAL PROBES ARE CONTROLLED AS FOLLOWS.

PROBE ID	TEMPERATURE CONTROL CONDITION	. . .	. . .
A001	X°C FOR X MINUTES, THEN X°C FOR X MINUTES	. . .	. . .
A002	X°C FOR X MINUTES, THEN X°C FOR X MINUTES	. . .	. . .
A003	X°C FOR X MINUTES	. . .	. . .
.

IF YOU ARE SATISFIED, CLICK SUBMIT.

FIG. 9

EXPERIMENT PROTOCOL CONFIRMATION SCREEN 2

THE PROBES ARE ARRANGED IN AN OPTIMAL MANNER ON THE CHIP BASED ON THE REACTION CONTROL CONDITIONS AND THE NUMBER AND THE PROPERTY OF THE PROBES. THE CHIP WILL BE SEPARATED INTO NUMBER A OF SHEETS.

~~~~~

CHIP NO. X

| COORDINATE | X1 | X2   | X3   | X4   | ... |
|------------|----|------|------|------|-----|
| Y1         |    |      | A002 | A003 | ... |
| Y2         |    | A001 |      |      | ... |
| ...        |    |      |      |      | ... |

~~~~~

IF YOU ARE SATISFIED, CLICK SUBMIT.

FIG. 10

EXPERIMENT PROTOCOL CONFIRMATION SCREEN 3

~~~~~

A001-56°C

A00478°C

A002-30°C

A00346°C

~~~~~

FIG. 11

EXPERIMENT PROTOCOL DOWNLOAD SCREEN

DO YOU DOWNLOAD AN EXPERIMENT PROTOCOL?

☐ YES, I WILL DOWNLOAD

☐ NO, I WILL NOT DOWNLOAD

ENTER DATE BY WHICH YOU SUBMIT YOUR SAMPLE TO US.

REACH US BY MONTH:__, DAY:__, YEAR:__

FIG. 12

ORDER CONTENT CONFIRMATION SCREEN

MAKE SURE THAT YOUR ORDER IS:

TYPE OF CHIP:A

REQUIRED SET NUMBER OF CHIP:B

NUMBER OF PROBES YOU WANT US TO SYNTHESIZE:X

NUMBER OF PROBES YOU PROVIDE:Y

ANALYSIS COMMISSION:YES

FIG. 13

PRICE/DELIVERY DATE DISPLAY SCREEN

ORDER NUMBER:XXXX
DELIVERY DATE:MONTH:xx, DAY:xx, YEAR:xxxx
PRICE:xxx, xxx, xxx YEN

DO YOU WANT TO ORDER UNDER THE
CONDITION ABOVE?

FIG. 14

COMPLETION DISPLAY SCREEN

WE HAVE RECEIVED YOUR ORDER. THANK YOU FOR
CHOOSING OUR SERVICE.
YOU MUST CHANGE/CANCEL YOUR ORDER BY MONTH:xx,
DAY:xx, YEAR:xxxx. NOTE THAT YOU MAY BE CHARGED
WHEN YOU CHANGE/CANCEL YOUR ORDER.

FIG. 15

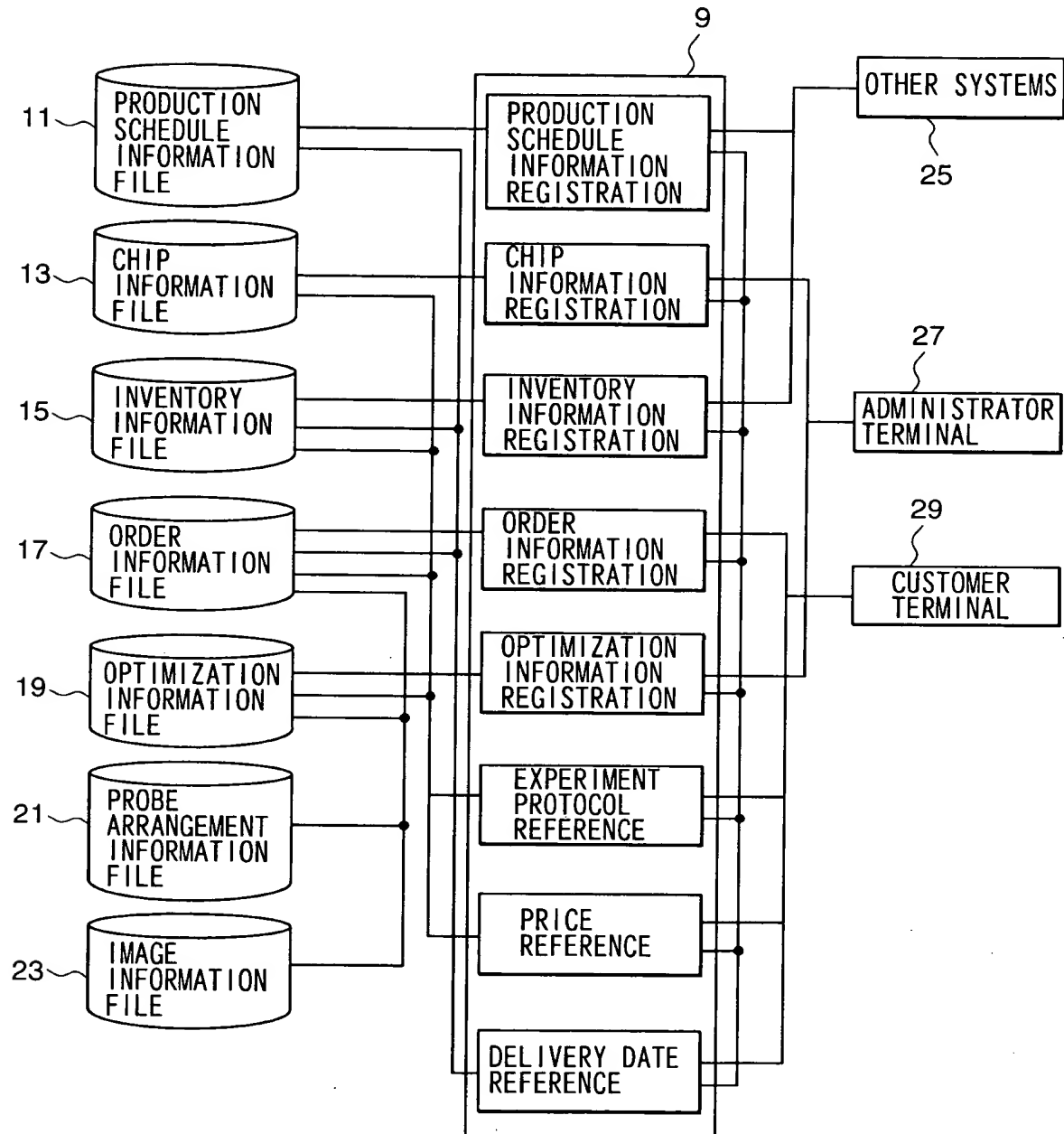


FIG. 16

PRODUCTION SCHEDULE INFORMATION FILE

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PRODUCTION LINE	SCHEDULE			
	MONTH:X, DAY:Y	MONTH:X, DAY:Y	MONTH:X, DAY:Y	MONTH:X, DAY:Y
	SHIFT 1	SHIFT 2	SHIFT 1	SHIFT 2
1	ORDER NUMBER X	AVAILABLE	AVAILABLE	ORDER NUMBER V
2	ORDER NUMBER Y	AVAILABLE	AVAILABLE	AVAILABLE
3	ORDER NUMBER Z	ORDER NUMBER W	AVAILABLE	AVAILABLE
. . .				

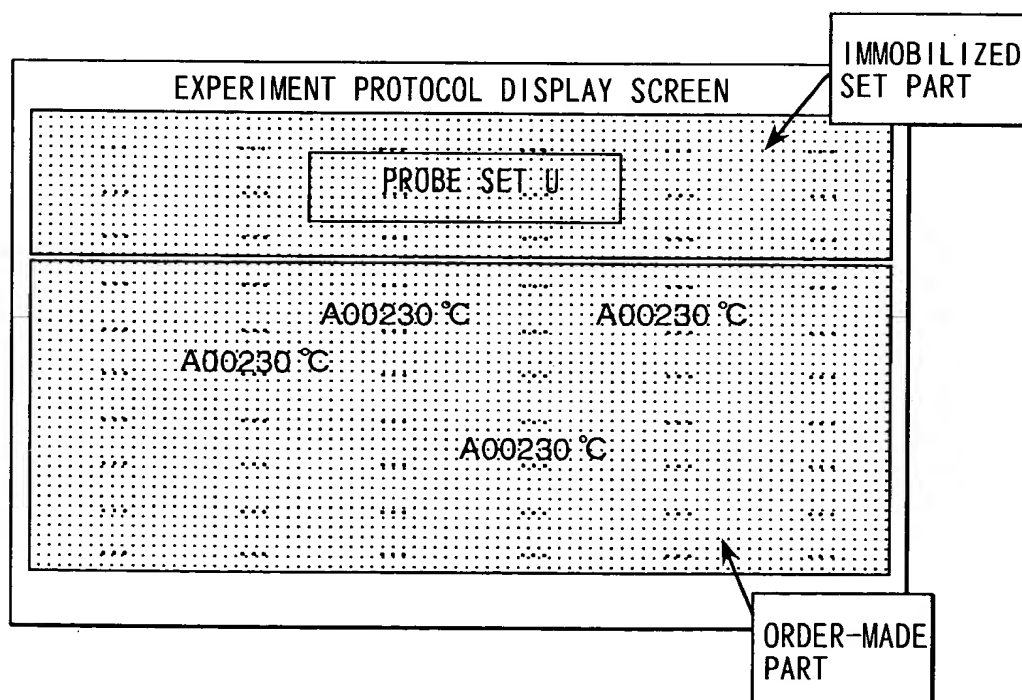
FIG. 18

FIG. 17

DNA CHIP INFORMATION FILE

13

TYPE	LICENSER	SIZE	CONTROLLABLE CONDITIONS		PROBE IMMOBILIZING METHOD	IMAGE
			CONDITION 1	CONDITION 2		
A	COMPANY X	XXXXX	XXX	XXX	SPOTTING A	XXX
B	COMPANY Y	XXXXX	XXX	XXX	SPOTTING B	XXX
C	UNIVERSITY Z	XXXXX	TEMPERATURE	XXX	SPOTTING C	XXX
.

PRODUCTION LINE	PRICE/HOUR	PRICE/PIECE	PRICE CALCULATION METHOD	AVAILABLE SET	MAXIMUM SPOT NUMBER	PREFERRED CONTROL CONDITION
1	XXX	XXX	XXX	T, U, V	XXX	XXX
2	XXX	XXX	XXX	T, U, V	XXX	XXX
3	XXX	XXX	XXX	T, U, V	XXX	XXX
.

RANGE OF CONTROL CONDITION 1			RANGE OF CONTROL CONDITION 2		
MAXIMUM VALUE	MINIMUM VALUE	MAXIMUM RANGE	MAXIMUM VALUE	MINIMUM VALUE	MAXIMUM RANGE
XXX	XXX	XXX	XXX	XXX	XXX
XXX	XXX	XXX	XXX	XXX	XXX
90°C	40°C	30°C	XXX	XXX	XXX
.

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FIG. 19

EXPERIMENT PROTOCOL DISPLAY SCREEN					
80	80	79	78	77	76
74	72	70	69	68	67
66	65	62	60	59	58
55	54	52	50	49	45
44	43	41	40	40	39
39	38	38	38	38	38
38	38	38	38	37	35
36	34	34	35	34	73
33	33	33	33	33	33
33	33	33	33	33	33

SORTED IN
DESCENDING ORDER
BY A CONTROL
CONDITION
(TEMPERATURE)

FIG. 20

INVENTORY CONTROL INFORMATION FILE

15

MATERIAL NAME	LOT NUMBER	STOCK AMOUNT	EXPIRATION DATE	UNIT PRICE
PROBE A001	XXXXX	XX mg	XXXX	XXX
PROBE A002	XXXXX	XX mg	XXXX	XXX
GLASS FOR A CHIP	XXXXX	XX PLATES	XXXX	XXX
. . .	. . .	. . .	. . .	XXX

FIG. 21

ORDER INFORMATION FILE

ORDER NUMBER	CUSTOMER NAME	CHIP TYPE	SET NUMBER/ NUMBER OF SHEETS	DIVISION OF ONE SET	ANALYSIS COMMISSION	STATUS	PRICE	DELIVERY DATE	USED PROBES Y/N S:SYNTHESIS ORDERED			
									A001	A002	XXX XX	.
XXXX X	XXX XX	A	XXX	NONE	Y	USED PROBES	XX	YY/ MM/ DD/	N	Y	N	.
XXXX X	XXX XX	A	XXX	2 SHEETS	N	DELI- VERED	XX	YY/ MM/ DD/	Y	Y,S	N	.
XXXX X	XXX XX	B	XXX	NONE	Y	DELI- VERED	XX	YY/ MM/ DD/	N	Y	Y	.
.
.

FIG. 22

PROBE ARRANGEMENT INFORMATION FILE

COORDINATE	Y1	Y2	Y3	Y4	Y5	Y6	.....
X1	XXX	XXX	XXX	XXX	XXX	XXX	.....
X2	XXX	XXX	XXX	XXX	XXX	XXX	.....
X3	XXX	XXX	XXX	XXX	XXX	XXX	.....
X4	XXX	XXX	XXX	XXX	XXX	XXX	.....
.....

FIG. 23

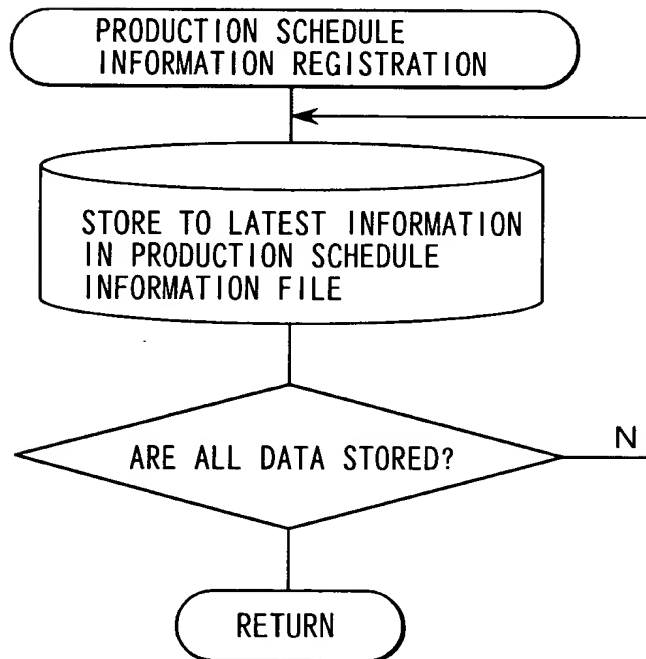
OPTIMIZATION METHOD INFORMATION FILE

CONTROL CONDITIONS	PROBE ARRANGEMENT OPTIMIZATION METHOD	ALGORITHM
TEMPERATURE	GRADIENT	ORDER PROBES MS EXCEL: DATA, SORT MOST PREFERRED KEY: TEMPERATURE, ASCENDING
X1	.	.
X2	.	.
X3	.	.
.	.	.

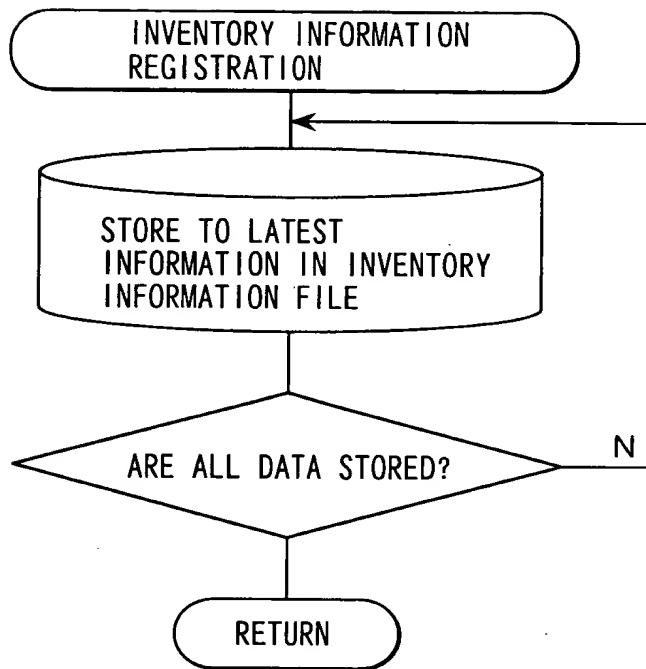
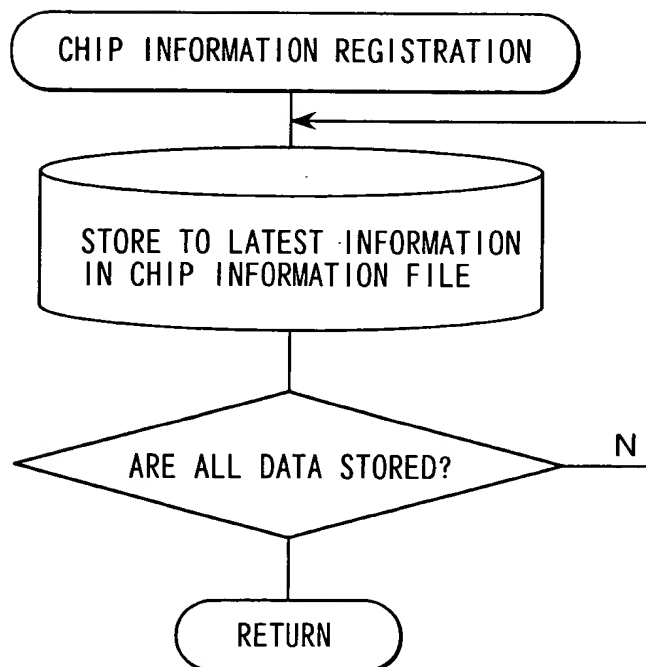
FIG. 24

IMAGE INFORMATION FILE

IMAGE NUMBER	DATA	23
XXXXX	IMAGE DATA	

FIG. 25

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FIG. 26*FIG. 27*

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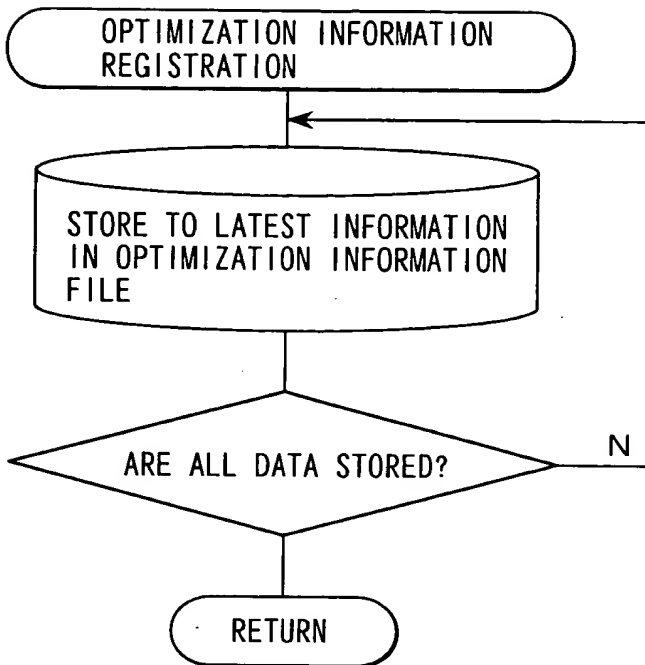
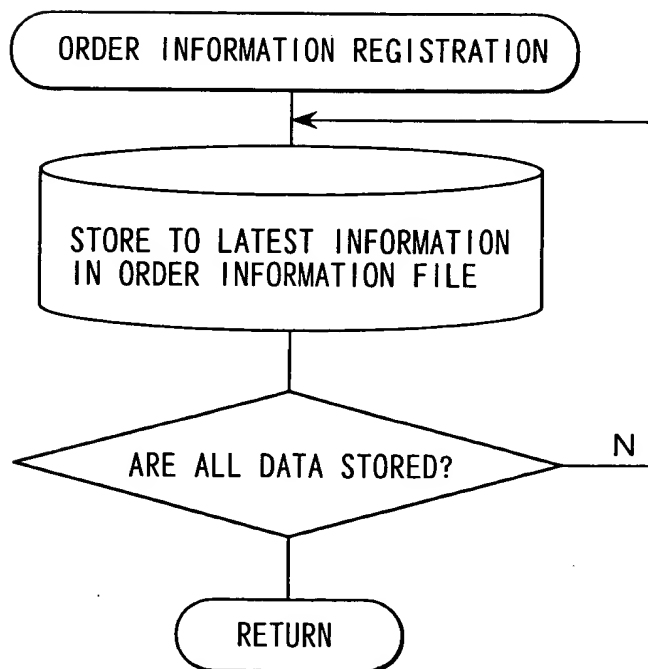
FIG. 28*FIG. 29*

FIG. 30

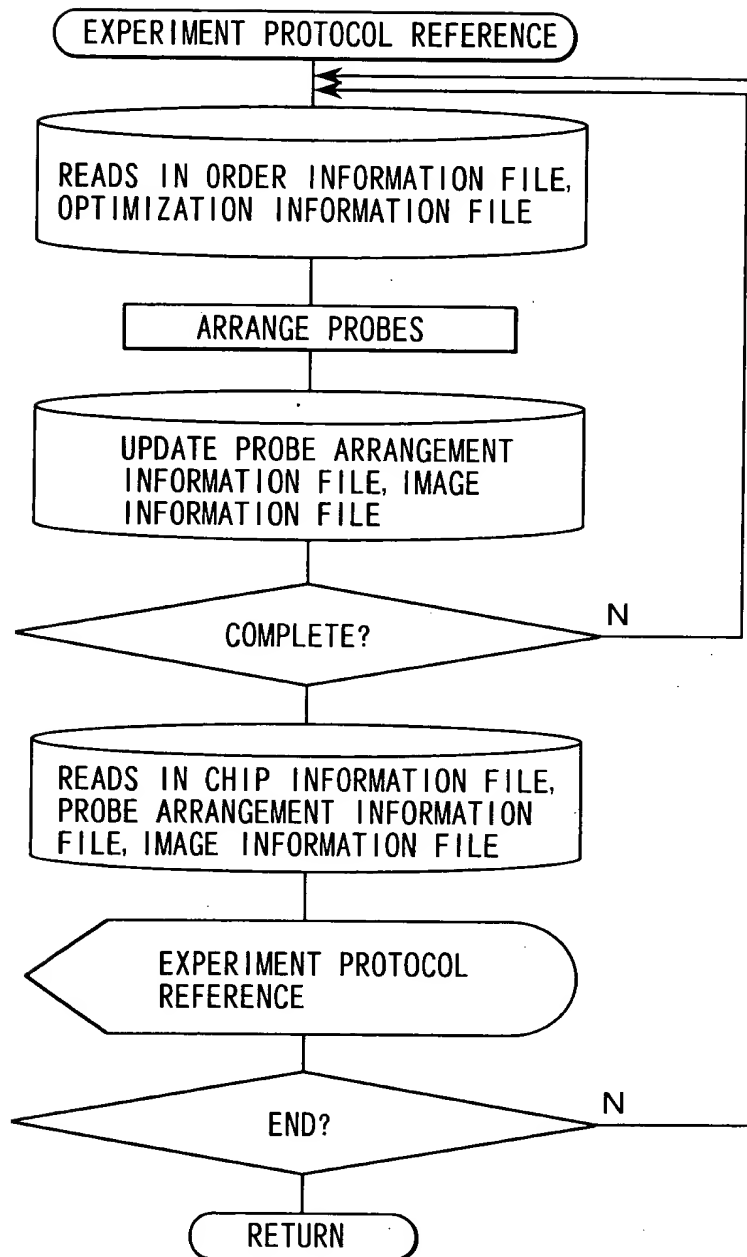


FIG. 31

PROBE ARRANGEMENT SCREEN					
...
...
...
...	...	AQ01
...	AQ04	...
...	AQ02
...
...	AQ03
...
...

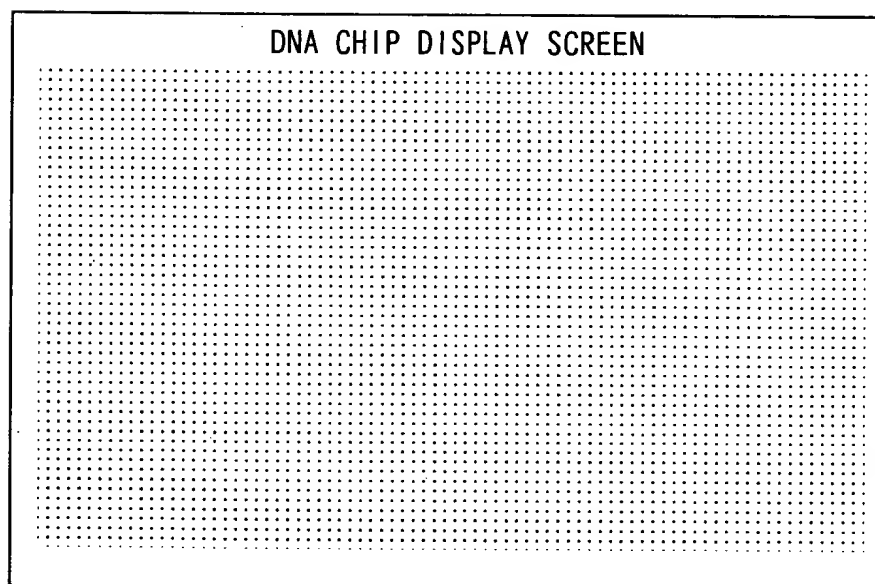
FIG. 32

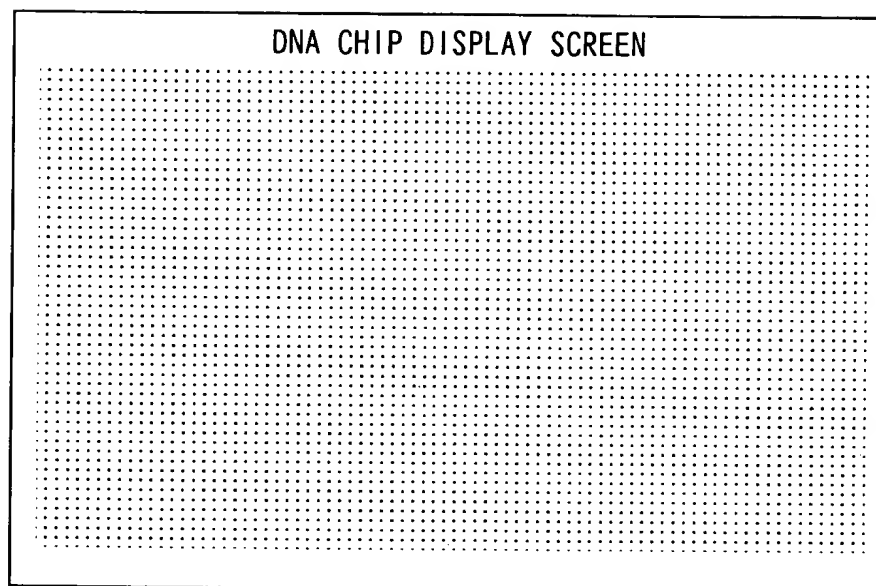
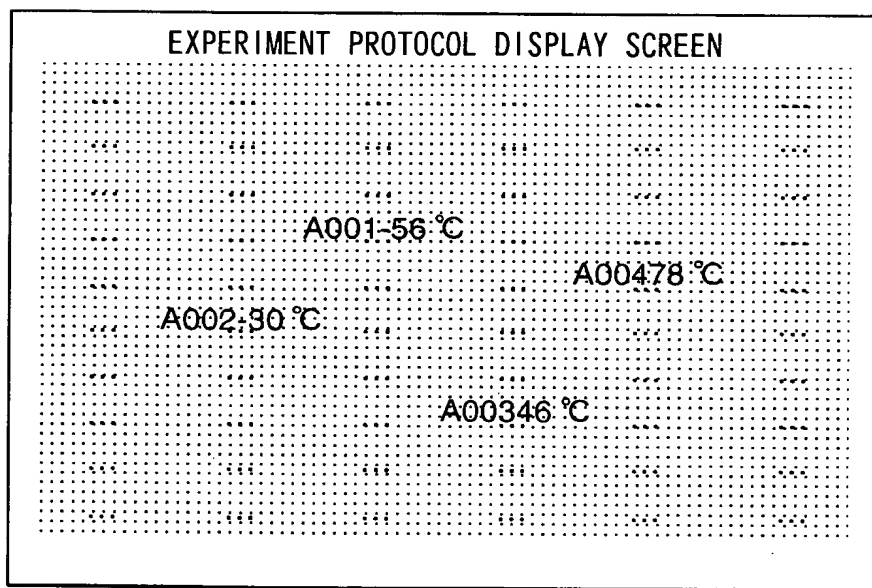
FIG. 33*FIG. 34*

FIG. 35

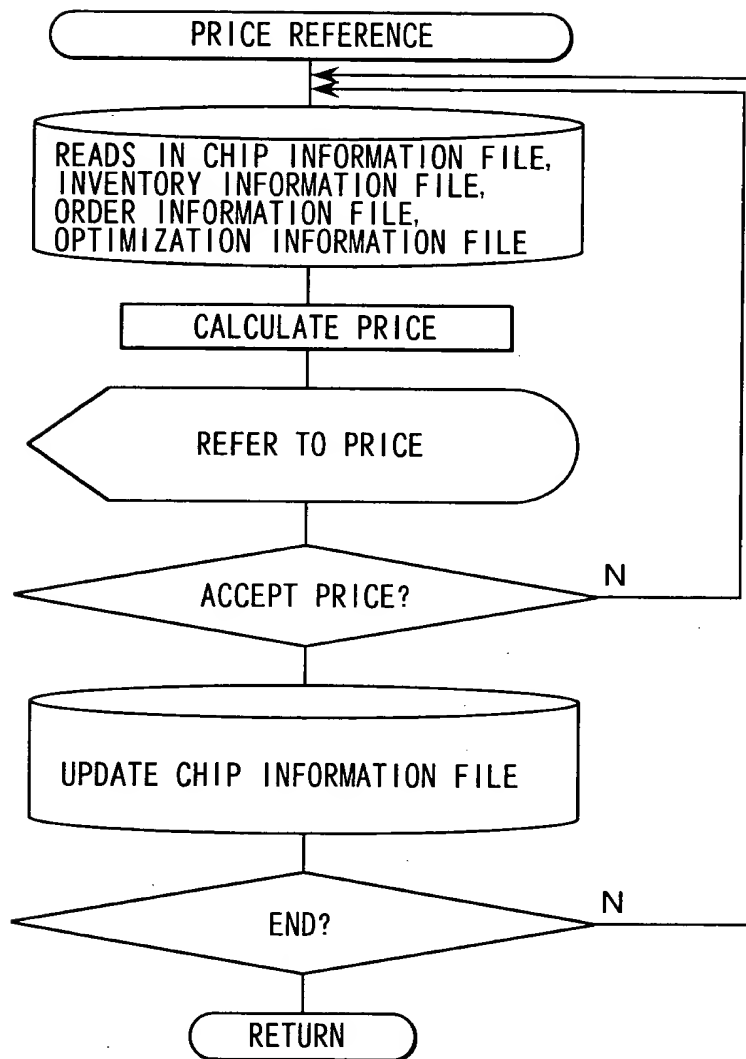


FIG. 36

